

**UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ellington et al.

Serial No.: 10/786,707

Filed: 02/25/2004

Art Unit: 1723

Examiner: Fortuna, Ana M.

Title: **METHOD FOR PRODUCING A NON-POROUS  
MEMBRANE**

M/S Appeals and Interferences

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**REPLY BRIEF**

Dear Sir:

The following remarks are in reply to the Examiner's Answer dated 30 January 2009. The Appeal Brief fee has already been paid. If additional fees are necessary, you are hereby authorized to charge Deposit Account No. 21-0279 in the name of United Technologies Corporation.

**REMARKS**

Respectfully, the Examiner's Answer raises numerous additional issues that require a brief response as follows.

Regarding Appellant's arguments under Section I of the Appeal Brief, the Examiner must find each and every claim element expressly or inherently described in the prior art reference. MPEP 2131. The Examiner seems to acknowledge that the WO'739 reference does not explicitly

disclose the claimed seamless boundary but speculates that the reference would inherently have the seamless boundary because:

“...a ‘seamless boundary’ is formed due to contact between the layer and the polymer diffusion, so that the layer can be dried as a single thicker layer. Since the solvent diffusion between the layers in wet layer is higher, a marking line or seam between layers is not significant or is not present.”

With all due respect, the Examiner’s explanation is a mere allegation and does not include any technical evidentiary support that justifies the conclusion that the reference inherently has a seamless boundary. For instance, the explanation mentions the technical matters of diffusion of the solvent, polymer diffusion, and that diffusion in a wet layer is higher. However, as evidenced by U.S. Patent 4,963,165 to Blume (cited in the WO’739 reference), solubility relations in polymer systems are complex because of the high molecular weight of polymers and solubility is difficult to predict (col.8, lines 5-15). Therefore, the Examiner should not be permitted to speculate that such complex technical matters would necessarily inherently provide the claimed seamless boundary without specific evidentiary support. For this reason, the rejection does not establish *prima facie* anticipation.

Regarding Applicant’s argument under Section III of the Appeal Brief, Appellant notes that the burden is on the Examiner under an obviousness inquiry to establish that the cited references teach all of the claimed elements and that there is a reason to combine the elements in the manner claimed. Here, the Examiner relies on the WO’739 reference for teaching a multi-layer membrane and the secondary references for teaching how to make a membrane. None of the cited references teach the specifics of how to make a multi-layer membrane, but the Examiner acknowledges that the references suggest “coating without drying between steps” (see Examiner Answer p.11), which would teach away from Appellant’s claims that recite forming the first membrane layer by drying in a first drying process. For this reason, the rejection does not establish *prima facie* obviousness.

**CLOSING**

For all of the reasons set forth above, and the reasons set forth in Appellant's Appeal Brief, the rejection of the claims is improper and should be reversed.

Respectfully submitted,

**CARLSON, GASKEY & OLDS**

/Matthew L. Koziarz/

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